

## 8. FCC §2.1055 & RSS-123 Section 5.2 – Frequency Stability

### 8.1 Applicable Standards

According to KDB 971168 D01 Section 9:

The frequency stability of the transmitter shall be measured while varying the ambient temperatures and supply voltages over the ranges specified in Section 2.1055. The specific frequency stability limits are provided in the relevant rules section(s).

According to RSS-123 Section 5.2:

Wireless microphones other than WMAS shall meet the conducted power or effective radiated power (e.r.p.), authorized bandwidth and frequency stability limits for the frequency bands specified in table 1. The conducted power or e.r.p. shall be measured in terms of average value.

| Table 1: Specifications for wireless microphones other than WMAS |                     |            |                            |                             |
|--|---------------------|------------|----------------------------|-----------------------------|
| Frequency band (MHz)   | Conducted power (W) | e.r.p. (W) | Authorized bandwidth (kHz) | Frequency stability (± ppm) |
| 26.10-26.48  | —                   | 1          | 200                        | 50                          |
| 88-107.5   | —                   | 1          | 200                        | 50                          |
| 150-174  | 0.05                | —          | 54                         | 50                          |
| 450-451  | —                   | 1          | 200                        | 50                          |
| 455-456  | —                   | 1          | 200                        | 50                          |
| 941.5-952  | 1                   | —          | 200                        | 20                          |
| 953-959.85   | 1                   | —          | 200                        | 20                          |
| 6930-6955  | 1                   | —          | 600                        | 10                          |
| 7100-7125  | 1                   | —          | 600                        | 10                          |

In addition, the frequency stability of wireless microphones shall be sufficient to ensure that the occupied bandwidth stays within its frequency band of operation when tested to the temperature and supply voltage variations specified in RSS-Gen.

WMAS shall have a mode of operation in which it is capable of transmitting at least three audio channels per megahertz.

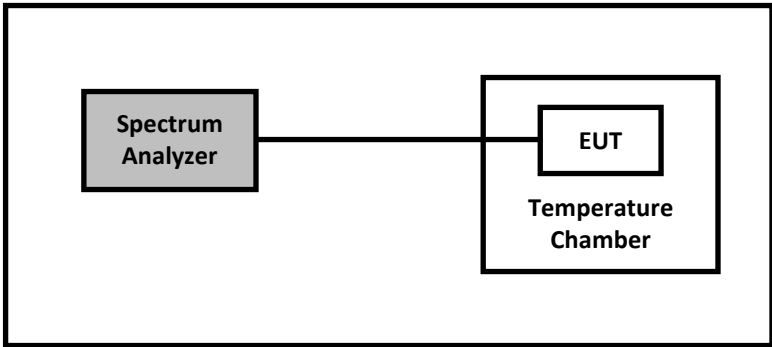
## 8.2 Test Procedure

According to FCC 2.1055:

- a) The frequency stability shall be measured with variation of ambient temperature as follows:
  - 1) From  $-30^{\circ}$  to  $+50^{\circ}$  centigrade for all equipment except that specified in paragraphs (a) (2) and (3) of this section.
  - 2) From  $-20^{\circ}$  to  $+50^{\circ}$  centigrade for equipment to be licensed for use in the Maritime Services under part 80 of this chapter, except for Class A, B, and S Emergency Position Indicating Radio beacons (EPIRBS), and equipment to be licensed for use above 952 MHz at operational fixed stations in all services, stations in the Local Television Transmission Service and Point-to-Point Microwave Radio Service under part 21 of this chapter, equipment licensed for use aboard aircraft in the Aviation Services under part 87 of this chapter, and equipment authorized for use in the Family Radio Service under part 95 of this chapter.
  - 3) From  $0^{\circ}$  to  $+50^{\circ}$  centigrade for equipment to be licensed for use in the Radio Broadcast Services under part 73 of this chapter.
- b) Frequency measurements shall be made at the extremes of the specified temperature range and at intervals of not more than  $10^{\circ}$  centigrade through the range. A period of time sufficient to stabilize all of the components of the oscillator circuit at each temperature level shall be allowed prior to frequency measurement. The short term transient effects on the frequency of the transmitter due to keying (except for broadcast transmitters) and any heating element cycling normally occurring at each ambient temperature level also shall be shown. Only the portion or portions of the transmitter containing the frequency determining and stabilizing circuitry need be subjected to the temperature variation test.
- c) The frequency stability shall be measured with variation of primary supply voltage as follows:
  - 1) Vary primary supply voltage from 85 to 115 percent of the nominal value for other than hand carried battery equipment.
  - 2) For hand carried, battery powered equipment, reduce primary supply voltage to the battery operating end point which shall be specified by the manufacturer.
  - 3) The supply voltage shall be measured at the input to the cable normally provided with the equipment, or at the power supply terminals if cables are not normally provided. Effects on frequency of transmitter keying (except for broadcast transmitters) and any heating element cycling at the nominal supply voltage and at each extreme also shall be shown.

If an unmodulated carrier is not available, the measurement method shall be described in the test report.

8.3 Test Setup Diagram



8.4 Test Equipment List and Details

| BACL No. | Manufacturer    | Description                      | Model      | Serial Number              | Calibration Date       | Calibration Interval |
|----------|-----------------|----------------------------------|------------|----------------------------|------------------------|----------------------|
| 912      | Rohde & Schwarz | Signal Analyzer                  | FSV40      | 1321.3008k3<br>9-101203-UW | 2024-07-25             | 1 year               |
| 1461     | Rohde & Schwarz | Signal Analyzer                  | FSQ26      | 200103                     | 2024-08-06             | 1 year               |
| 1060     | BACL            | Temperature and Humidity Chamber | BTH-150-40 | 30078                      | 2024-12-03             | 1 year               |
| -        | -               | RF Cable                         | -          | -                          | Each time <sup>1</sup> | N/A                  |

Note<sup>1</sup>: cable included in the test set-up was checked each time before testing.

*Statement of Traceability: BACL Corp. attests that all of the calibrations on the equipment items listed above were traceable to NIST or to another internationally recognized National Metrology Institute (NMI), and were compliant with the latest version of A2LA policy P102 “A2LA Policy on Metrological Traceability”.*

8.5 Test Environmental Conditions

|                    |                    |
|--------------------|--------------------|
| Temperature:       | 17 to 19 °C        |
| Relative Humidity: | 47.2 to 51.7 %     |
| ATM Pressure:      | 101.2 to 101.7 kPa |

The testing was performed by Arturo Reyes from 2024-12-04 to 2024-12-27 at RF test site.

## 8.6 Test Results

The data presented on the next page is based on testing performed at frequencies outside the EUT's operating frequency range, but is deemed sufficient to evaluate the frequency tolerance performance of the EUT.

Below is a list of the actual tested frequencies that cover each of the EUT's operating frequencies.

| Authorized Bands<br>for FCC<br>(MHz)   | Authorized<br>Bands for IC<br>(MHz) | Tested Frequency<br>(MHz) | Cover this EUT's<br>Operating Frequency<br>(MHz) |
|--|-------------------------------------|---------------------------|--|
| 941.500 – 944.000<br>944.000 – 952.000 | 941.500 – 952.000                   | 941.525                   | 941.600  |
|  |                                     | 946.750                   | 946.750  |
|  |                                     | 951.975                   | 951.900  |
| 952.850 – 956.250                      | 953.000 – 959.850                   | 953.025                   | 953.100  |
|  |                                     | 956.225                   | 956.150  |
| 956.450 – 959.850                      |                                     | 956.475                   | 956.550  |
|  |                                     | 959.825                   | 959.750  |

**Normal Voltage, -30°C Temperature**

| Mode | Channel Frequency (MHz) | Left Frequency (MHz) | Right Frequency (MHz) | Center Frequency (MHz) | Deviation (ppm) | Limits (ppm) | Result |
|------|-------------------------|----------------------|-----------------------|------------------------|-----------------|--------------|--------|
| D2   | 941.525                 | 941.4407             | 941.6078              | 941.5243               | 0.7966          | ±20          | Pass   |
|      | 946.750                 | 946.6642             | 946.8334              | 946.7488               | 1.2675          | ±20          | Pass   |
|      | 951.975                 | 951.8922             | 952.0602              | 951.9762               | -1.2605         | ±20          | Pass   |
|      | 953.025                 | 952.9398             | 953.1075              | 953.0237               | 1.4165          | ±20          | Pass   |
|      | 956.225                 | 956.1395             | 956.3090              | 956.2243               | 0.7843          | ±20          | Pass   |
|      | 956.475                 | 956.3922             | 956.5581              | 956.4752               | -0.1568         | ±20          | Pass   |
|      | 959.825                 | 959.7404             | 959.9084              | 959.8244               | 0.6251          | ±20          | Pass   |
| HDM  | 941.525                 | 941.4679             | 941.5798              | 941.5239               | 1.2044          | ±20          | Pass   |
|      | 946.750                 | 946.6943             | 946.8044              | 946.7494               | 0.6834          | ±20          | Pass   |
|      | 951.975                 | 951.9177             | 952.0294              | 951.9736               | 1.4969          | ±20          | Pass   |
|      | 953.025                 | 952.9670             | 953.0818              | 953.0244               | 0.6495          | ±20          | Pass   |
|      | 956.225                 | 956.1695             | 956.2796              | 956.2245               | 0.4899          | ±20          | Pass   |
|      | 956.475                 | 956.4185             | 956.5303              | 956.4744               | 0.6273          | ±20          | Pass   |
|      | 959.825                 | 959.7694             | 959.8788              | 959.8241               | 0.9184          | ±20          | Pass   |

**Normal Voltage, -20°C Temperature**

| Mode | Channel Frequency (MHz) | Left Frequency (MHz) | Right Frequency (MHz) | Center Frequency (MHz) | Deviation (ppm) | Limits (ppm) | Result |
|------|-------------------------|----------------------|-----------------------|------------------------|-----------------|--------------|--------|
| D2   | 941.525                 | 941.4424             | 941.6083              | 941.5254               | -0.3882         | ±20          | Pass   |
|      | 946.750                 | 946.6666             | 946.8330              | 946.7498               | 0.2091          | ±20          | Pass   |
|      | 951.975                 | 951.8910             | 952.0586              | 951.9748               | 0.2164          | ±20          | Pass   |
|      | 953.025                 | 952.9410             | 953.1080              | 953.0245               | 0.5016          | ±20          | Pass   |
|      | 956.225                 | 956.1405             | 956.3075              | 956.2240               | 1.0395          | ±20          | Pass   |
|      | 956.475                 | 956.3905             | 956.5575              | 956.4740               | 1.0586          | ±20          | Pass   |
|      | 959.825                 | 959.7405             | 959.9094              | 959.8249               | 0.0880          | ±20          | Pass   |
| HDM  | 941.525                 | 941.4696             | 941.5806              | 941.5251               | -0.0897         | ±20          | Pass   |
|      | 946.750                 | 946.6945             | 946.8057              | 946.7501               | -0.1283         | ±20          | Pass   |
|      | 951.975                 | 951.9186             | 952.0308              | 951.9747               | 0.3251          | ±20          | Pass   |
|      | 953.025                 | 952.9680             | 953.0805              | 953.0242               | 0.8163          | ±20          | Pass   |
|      | 956.225                 | 956.1692             | 956.2800              | 956.2246               | 0.4607          | ±20          | Pass   |
|      | 956.475                 | 956.4194             | 956.5297              | 956.4746               | 0.4605          | ±20          | Pass   |
|      | 959.825                 | 959.7692             | 959.8800              | 959.8246               | 0.4199          | ±20          | Pass   |

**Normal Voltage, -10°C Temperature**

| Mode | Channel Frequency (MHz) | Left Frequency (MHz) | Right Frequency (MHz) | Center Frequency (MHz) | Deviation (ppm) | Limits (ppm) | Result |
|------|-------------------------|----------------------|-----------------------|------------------------|-----------------|--------------|--------|
| D2   | 941.525                 | 941.4416             | 941.6073              | 941.5244               | 0.6070          | ±20          | Pass   |
|      | 946.750                 | 946.6648             | 946.8332              | 946.7490               | 1.0610          | ±20          | Pass   |
|      | 951.975                 | 951.8920             | 952.0577              | 951.9749               | 0.1182          | ±20          | Pass   |
|      | 953.025                 | 952.9427             | 953.1079              | 953.0253               | -0.2854         | ±20          | Pass   |
|      | 956.225                 | 956.1428             | 956.3090              | 956.2259               | -0.9412         | ±20          | Pass   |
|      | 956.475                 | 956.3913             | 956.5576              | 956.4745               | 0.5682          | ±20          | Pass   |
|      | 959.825                 | 959.7407             | 959.9090              | 959.8249               | 0.1370          | ±20          | Pass   |
| HDM  | 941.525                 | 941.4689             | 941.5812              | 941.5250               | -0.0196         | ±20          | Pass   |
|      | 946.750                 | 946.6936             | 946.8055              | 946.7496               | 0.4753          | ±20          | Pass   |
|      | 951.975                 | 951.9193             | 952.0308              | 951.9750               | -0.0494         | ±20          | Pass   |
|      | 953.025                 | 952.9697             | 953.0804              | 953.0250               | -0.0493         | ±20          | Pass   |
|      | 956.225                 | 956.1691             | 956.2794              | 956.2243               | 0.7749          | ±20          | Pass   |
|      | 956.475                 | 956.4191             | 956.5302              | 956.4747               | 0.3529          | ±20          | Pass   |
|      | 959.825                 | 959.7687             | 959.8801              | 959.8244               | 0.6152          | ±20          | Pass   |

**Normal Voltage, 0°C Temperature**

| Mode | Channel Frequency (MHz) | Left Frequency (MHz) | Right Frequency (MHz) | Center Frequency (MHz) | Deviation (ppm) | Limits (ppm) | Result |
|------|-------------------------|----------------------|-----------------------|------------------------|-----------------|--------------|--------|
| D2   | 941.525                 | 941.4406             | 941.6085              | 941.5246               | 0.4578          | ±20          | Pass   |
|      | 946.750                 | 946.6657             | 946.8335              | 946.7496               | 0.3866          | ±20          | Pass   |
|      | 951.975                 | 951.8921             | 952.0572              | 951.9746               | 0.4134          | ±20          | Pass   |
|      | 953.025                 | 952.9422             | 953.1074              | 953.0248               | 0.2167          | ±20          | Pass   |
|      | 956.225                 | 956.1413             | 956.3081              | 956.2247               | 0.2745          | ±20          | Pass   |
|      | 956.475                 | 956.3902             | 956.5570              | 956.4736               | 1.4799          | ±20          | Pass   |
|      | 959.825                 | 959.7408             | 959.9078              | 959.8243               | 0.7324          | ±20          | Pass   |
| HDM  | 941.525                 | 941.4698             | 941.5808              | 941.5253               | -0.3287         | ±20          | Pass   |
|      | 946.750                 | 946.6943             | 946.8059              | 946.7501               | -0.0597         | ±20          | Pass   |
|      | 951.975                 | 951.9196             | 952.0298              | 951.9747               | 0.3251          | ±20          | Pass   |
|      | 953.025                 | 952.9695             | 953.0810              | 953.0252               | -0.2555         | ±20          | Pass   |
|      | 956.225                 | 956.1694             | 956.2808              | 956.2251               | -0.0884         | ±20          | Pass   |
|      | 956.475                 | 956.4184             | 956.5310              | 956.4747               | 0.2938          | ±20          | Pass   |
|      | 959.825                 | 959.7693             | 959.8797              | 959.8245               | 0.5173          | ±20          | Pass   |

**Normal Voltage, 10°C Temperature**

| Mode | Channel Frequency (MHz) | Left Frequency (MHz) | Right Frequency (MHz) | Center Frequency (MHz) | Deviation (ppm) | Limits (ppm) | Result |
|------|-------------------------|----------------------|-----------------------|------------------------|-----------------|--------------|--------|
| D2   | 941.525                 | 941.4410             | 941.6078              | 941.5244               | 0.6373          | ±20          | Pass   |
|      | 946.750                 | 946.6663             | 946.8331              | 946.7497               | 0.3169          | ±20          | Pass   |
|      | 951.975                 | 951.8913             | 952.0590              | 951.9752               | -0.1576         | ±20          | Pass   |
|      | 953.025                 | 952.9404             | 953.1081              | 953.0243               | 0.7870          | ±20          | Pass   |
|      | 956.225                 | 956.1413             | 956.3087              | 956.2250               | 0.0000          | ±20          | Pass   |
|      | 956.475                 | 956.3907             | 956.5584              | 956.4746               | 0.4705          | ±20          | Pass   |
|      | 959.825                 | 959.7419             | 959.9075              | 959.8247               | 0.3126          | ±20          | Pass   |
| HDM  | 941.525                 | 941.4695             | 941.5805              | 941.5250               | 0.0000          | ±20          | Pass   |
|      | 946.750                 | 946.6942             | 946.8058              | 946.7500               | 0.0000          | ±20          | Pass   |
|      | 951.975                 | 951.9195             | 952.0311              | 951.9753               | -0.3151         | ±20          | Pass   |
|      | 953.025                 | 952.9692             | 953.0808              | 953.0250               | 0.0000          | ±20          | Pass   |
|      | 956.225                 | 956.1683             | 956.2799              | 956.2241               | 0.9412          | ±20          | Pass   |
|      | 956.475                 | 956.4189             | 956.5302              | 956.4746               | 0.4705          | ±20          | Pass   |
|      | 959.825                 | 959.7698             | 959.8802              | 959.8250               | 0.0000          | ±20          | Pass   |

**Normal Voltage, 20°C Temperature**

| Mode | Channel Frequency (MHz) | Left Frequency (MHz) | Right Frequency (MHz) | Center Frequency (MHz) | Deviation (ppm) | Limits (ppm) | Result |
|------|-------------------------|----------------------|-----------------------|------------------------|-----------------|--------------|--------|
| D2   | 941.525                 | 941.4393             | 941.6076              | 941.5235               | 1.6330          | ±20          | Pass   |
|      | 946.750                 | 946.6656             | 946.8335              | 946.7496               | 0.4653          | ±20          | Pass   |
|      | 951.975                 | 951.8910             | 952.0571              | 951.9741               | 0.9753          | ±20          | Pass   |
|      | 953.025                 | 952.9404             | 953.1089              | 953.0247               | 0.3442          | ±20          | Pass   |
|      | 956.225                 | 956.1423             | 956.3081              | 956.2252               | -0.2254         | ±20          | Pass   |
|      | 956.475                 | 956.3912             | 956.5591              | 956.4752               | -0.1960         | ±20          | Pass   |
|      | 959.825                 | 959.7427             | 959.9077              | 959.8252               | -0.2245         | ±20          | Pass   |
| HDM  | 941.525                 | 941.4696             | 941.5802              | 941.5249               | 0.1391          | ±20          | Pass   |
|      | 946.750                 | 946.6945             | 946.8060              | 946.7502               | -0.2577         | ±20          | Pass   |
|      | 951.975                 | 951.9189             | 952.0296              | 951.9743               | 0.7679          | ±20          | Pass   |
|      | 953.025                 | 952.9694             | 953.0800              | 953.0247               | 0.2854          | ±20          | Pass   |
|      | 956.225                 | 956.1692             | 956.2811              | 956.2251               | -0.1375         | ±20          | Pass   |
|      | 956.475                 | 956.4199             | 956.5305              | 956.4752               | -0.2060         | ±20          | Pass   |
|      | 959.825                 | 959.7688             | 959.8811              | 959.8249               | 0.0682          | ±20          | Pass   |

**Normal Voltage, 30°C Temperature**

| Mode | Channel Frequency (MHz) | Left Frequency (MHz) | Right Frequency (MHz) | Center Frequency (MHz) | Deviation (ppm) | Limits (ppm) | Result |
|------|-------------------------|----------------------|-----------------------|------------------------|-----------------|--------------|--------|
| D2   | 941.525                 | 941.4415             | 941.6079              | 941.5247               | 0.3186          | ±20          | Pass   |
|      | 946.750                 | 946.6657             | 946.8342              | 946.7500               | 0.0201          | ±20          | Pass   |
|      | 951.975                 | 951.8919             | 952.0581              | 951.9750               | 0.0100          | ±20          | Pass   |
|      | 953.025                 | 952.9415             | 953.1091              | 953.0253               | -0.3541         | ±20          | Pass   |
|      | 956.225                 | 956.1405             | 956.3082              | 956.2243               | 0.7252          | ±20          | Pass   |
|      | 956.475                 | 956.3910             | 956.5570              | 956.4740               | 1.0100          | ±20          | Pass   |
|      | 959.825                 | 959.7428             | 959.9085              | 959.8256               | -0.6642         | ±20          | Pass   |
| HDM  | 941.525                 | 941.4702             | 941.5806              | 941.5254               | -0.4286         | ±20          | Pass   |
|      | 946.750                 | 946.6946             | 946.8050              | 946.7498               | 0.2176          | ±20          | Pass   |
|      | 951.975                 | 951.9194             | 952.0307              | 951.9750               | -0.0294         | ±20          | Pass   |
|      | 953.025                 | 952.9703             | 953.0790              | 953.0246               | 0.3835          | ±20          | Pass   |
|      | 956.225                 | 956.1708             | 956.2804              | 956.2256               | -0.6175         | ±20          | Pass   |
|      | 956.475                 | 956.4198             | 956.5306              | 956.4752               | -0.2159         | ±20          | Pass   |
|      | 959.825                 | 959.7697             | 959.8800              | 959.8249               | 0.1266          | ±20          | Pass   |

**Normal Voltage, 40°C Temperature**

| Mode | Channel Frequency (MHz) | Left Frequency (MHz) | Right Frequency (MHz) | Center Frequency (MHz) | Deviation (ppm) | Limits (ppm) | Result |
|------|-------------------------|----------------------|-----------------------|------------------------|-----------------|--------------|--------|
| D2   | 941.525                 | 941.4419             | 941.6085              | 941.5252               | -0.2092         | ±20          | Pass   |
|      | 946.750                 | 946.6670             | 946.8323              | 946.7497               | 0.3369          | ±20          | Pass   |
|      | 951.975                 | 951.8923             | 952.0590              | 951.9756               | -0.6697         | ±20          | Pass   |
|      | 953.025                 | 952.9406             | 953.1083              | 953.0244               | 0.5808          | ±20          | Pass   |
|      | 956.225                 | 956.1409             | 956.3072              | 956.2241               | 0.9904          | ±20          | Pass   |
|      | 956.475                 | 956.3901             | 956.5599              | 956.4750               | -0.0199         | ±20          | Pass   |
|      | 959.825                 | 959.7411             | 959.9068              | 959.8240               | 1.0939          | ±20          | Pass   |
| HDM  | 941.525                 | 941.4697             | 941.5810              | 941.5254               | -0.3882         | ±20          | Pass   |
|      | 946.750                 | 946.6949             | 946.8060              | 946.7504               | -0.4653         | ±20          | Pass   |
|      | 951.975                 | 951.9197             | 952.0299              | 951.9748               | 0.2364          | ±20          | Pass   |
|      | 953.025                 | 952.9694             | 953.0806              | 953.0250               | 0.0199          | ±20          | Pass   |
|      | 956.225                 | 956.1693             | 956.2804              | 956.2248               | 0.1668          | ±20          | Pass   |
|      | 956.475                 | 956.4192             | 956.5312              | 956.4752               | -0.2253         | ±20          | Pass   |
|      | 959.825                 | 959.7703             | 959.8810              | 959.8257               | -0.6835         | ±20          | Pass   |



**Normal Voltage, 50°C Temperature**

| Mode | Channel Frequency (MHz) | Left Frequency (MHz) | Right Frequency (MHz) | Center Frequency (MHz) | Deviation (ppm) | Limits (ppm) | Result |
|------|-------------------------|----------------------|-----------------------|------------------------|-----------------|--------------|--------|
| D2   | 941.525                 | 941.4419             | 941.6081              | 941.5250               | 0.0096          | ±20          | Pass   |
|      | 946.750                 | 946.6664             | 946.8336              | 946.7500               | -0.0201         | ±20          | Pass   |
|      | 951.975                 | 951.8950             | 952.0569              | 951.9759               | -0.9948         | ±20          | Pass   |
|      | 953.025                 | 952.9421             | 953.1087              | 953.0254               | -0.3741         | ±20          | Pass   |
|      | 956.225                 | 956.1418             | 956.3084              | 956.2251               | -0.0784         | ±20          | Pass   |
|      | 956.475                 | 956.3904             | 956.5570              | 956.4737               | 1.3722          | ±20          | Pass   |
|      | 959.825                 | 959.7419             | 959.9090              | 959.8254               | -0.4595         | ±20          | Pass   |
| HDM  | 941.525                 | 941.4692             | 941.5803              | 941.5247               | 0.2788          | ±20          | Pass   |
|      | 946.750                 | 946.6936             | 946.8065              | 946.7500               | -0.0496         | ±20          | Pass   |
|      | 951.975                 | 951.9195             | 952.0292              | 951.9744               | 0.6697          | ±20          | Pass   |
|      | 953.025                 | 952.9696             | 953.0811              | 953.0254               | -0.3935         | ±20          | Pass   |
|      | 956.225                 | 956.1684             | 956.2803              | 956.2244               | 0.6567          | ±20          | Pass   |
|      | 956.475                 | 956.4189             | 956.5308              | 956.4749               | 0.1568          | ±20          | Pass   |
|      | 959.825                 | 959.7712             | 959.8801              | 959.8257               | -0.7033         | ±20          | Pass   |

**Normal Temperature, -15% (3.06V) Voltage**

| Mode | Channel Frequency (MHz) | Left Frequency (MHz) | Right Frequency (MHz) | Center Frequency (MHz) | Deviation (ppm) | Limits (ppm) | Result |
|------|-------------------------|----------------------|-----------------------|------------------------|-----------------|--------------|--------|
| D2   | 941.525                 | 941.4403             | 941.6088              | 941.5246               | 0.4578          | ±20          | Pass   |
|      | 946.750                 | 946.6669             | 946.8344              | 946.7506               | -0.6834         | ±20          | Pass   |
|      | 951.975                 | 951.8921             | 952.0594              | 951.9758               | -0.8073         | ±20          | Pass   |
|      | 953.025                 | 952.9418             | 953.1070              | 953.0244               | 0.6490          | ±20          | Pass   |
|      | 956.225                 | 956.1422             | 956.3079              | 956.2251               | -0.0685         | ±20          | Pass   |
|      | 956.475                 | 956.3922             | 956.5588              | 956.4755               | -0.5196         | ±20          | Pass   |
|      | 959.825                 | 959.7421             | 959.9093              | 959.8257               | -0.7324         | ±20          | Pass   |
| HDM  | 941.525                 | 941.4699             | 941.5804              | 941.5252               | -0.1593         | ±20          | Pass   |
|      | 946.750                 | 946.6936             | 946.8055              | 946.7495               | 0.5149          | ±20          | Pass   |
|      | 951.975                 | 951.9195             | 952.0312              | 951.9754               | -0.3939         | ±20          | Pass   |
|      | 953.025                 | 952.9698             | 953.0810              | 953.0254               | -0.4522         | ±20          | Pass   |
|      | 956.225                 | 956.1691             | 956.2806              | 956.2249               | 0.1375          | ±20          | Pass   |
|      | 956.475                 | 956.4197             | 956.5306              | 956.4752               | -0.1762         | ±20          | Pass   |
|      | 959.825                 | 959.7692             | 959.8813              | 959.8252               | -0.2443         | ±20          | Pass   |

**Normal Temperature, +15% (4.14V) Voltage**

| Mode | Channel Frequency (MHz) | Left Frequency (MHz) | Right Frequency (MHz) | Center Frequency (MHz) | Deviation (ppm) | Limits (ppm) | Result |
|------|-------------------------|----------------------|-----------------------|------------------------|-----------------|--------------|--------|
| D2   | 941.525                 | 941.4417             | 941.6091              | 941.5254               | -0.4280         | ±20          | Pass   |
|      | 946.750                 | 946.6679             | 946.8333              | 946.7506               | -0.6633         | ±20          | Pass   |
|      | 951.975                 | 951.8907             | 952.0579              | 951.9743               | 0.7091          | ±20          | Pass   |
|      | 953.025                 | 952.9410             | 953.1080              | 953.0245               | 0.5210          | ±20          | Pass   |
|      | 956.225                 | 956.1414             | 956.3083              | 956.2249               | 0.1569          | ±20          | Pass   |
|      | 956.475                 | 956.3917             | 956.5597              | 956.4757               | -0.7742         | ±20          | Pass   |
|      | 959.825                 | 959.7408             | 959.9097              | 959.8253               | -0.2933         | ±20          | Pass   |
| HDM  | 941.525                 | 941.4682             | 941.5804              | 941.5243               | 0.7467          | ±20          | Pass   |
|      | 946.750                 | 946.6939             | 946.8063              | 946.7501               | -0.0988         | ±20          | Pass   |
|      | 951.975                 | 951.9195             | 952.0304              | 951.9749               | 0.0594          | ±20          | Pass   |
|      | 953.025                 | 952.9690             | 953.0808              | 953.0249               | 0.0981          | ±20          | Pass   |
|      | 956.225                 | 956.1685             | 956.2806              | 956.2246               | 0.4607          | ±20          | Pass   |
|      | 956.475                 | 956.4193             | 956.5306              | 956.4750               | 0.0491          | ±20          | Pass   |
|      | 959.825                 | 959.7692             | 959.8800              | 959.8246               | 0.4006          | ±20          | Pass   |

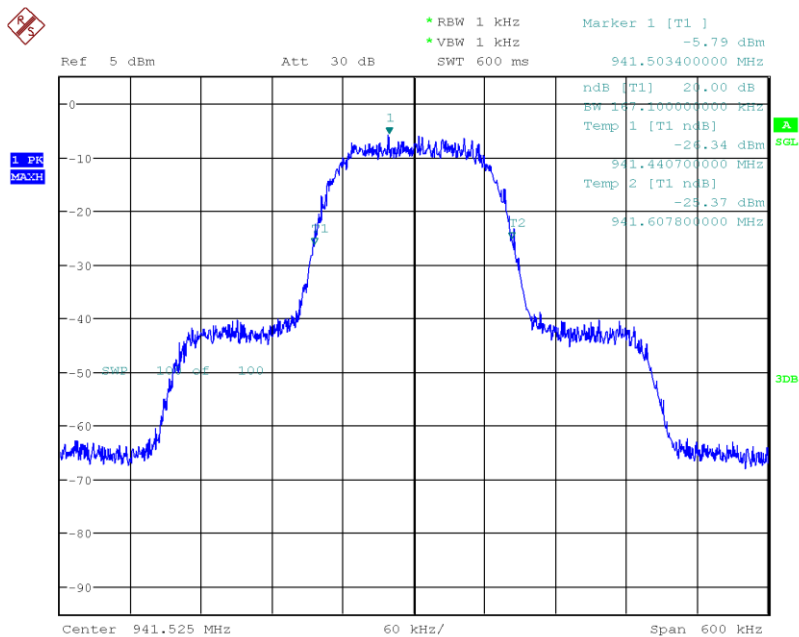
Note 1: Center frequency (MHz) = [Left Frequency (MHz) + Right Frequency (MHz)] / 2

Note 2: PPM = [Center Frequency (MHz) – Channel Frequency (MHz)] / Channel Frequency (MHz) \* 1000000

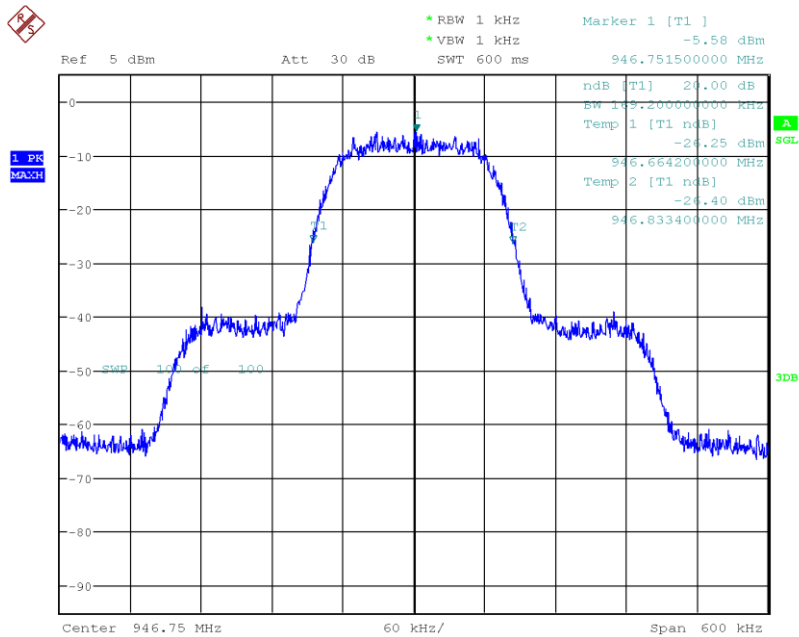
Please refer to Section 8.7 for detailed Frequency Stability plots.

8.7 Frequency Stability Test Plots

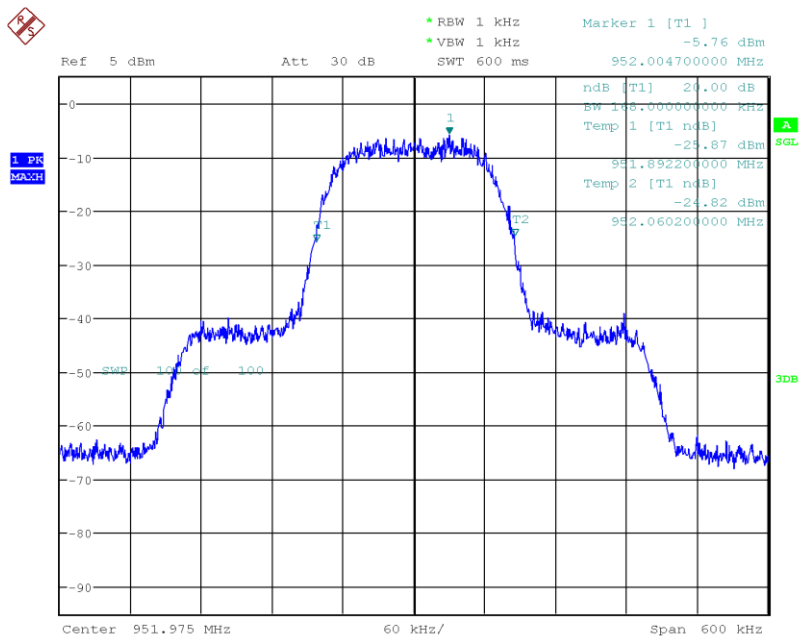
Normal Voltage, -30°C, D2 mode, 941.525 MHz



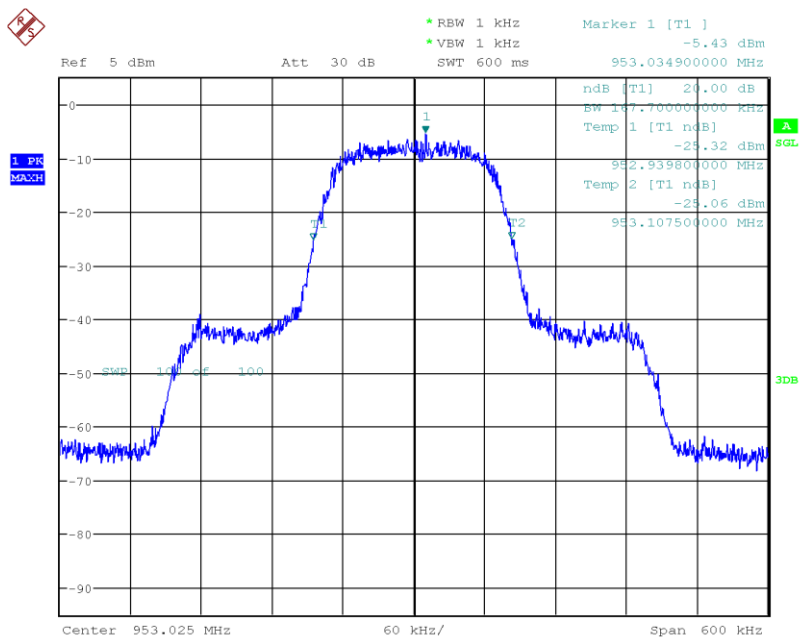
Normal Voltage, -30°C, D2 mode, 946.750 MHz



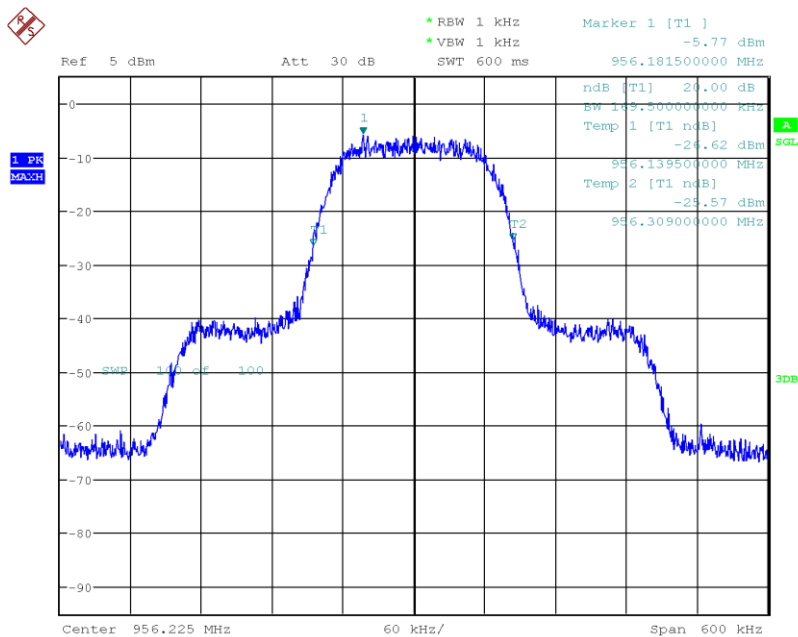
Normal Voltage, -30°C, D2 mode, 951.975 MHz



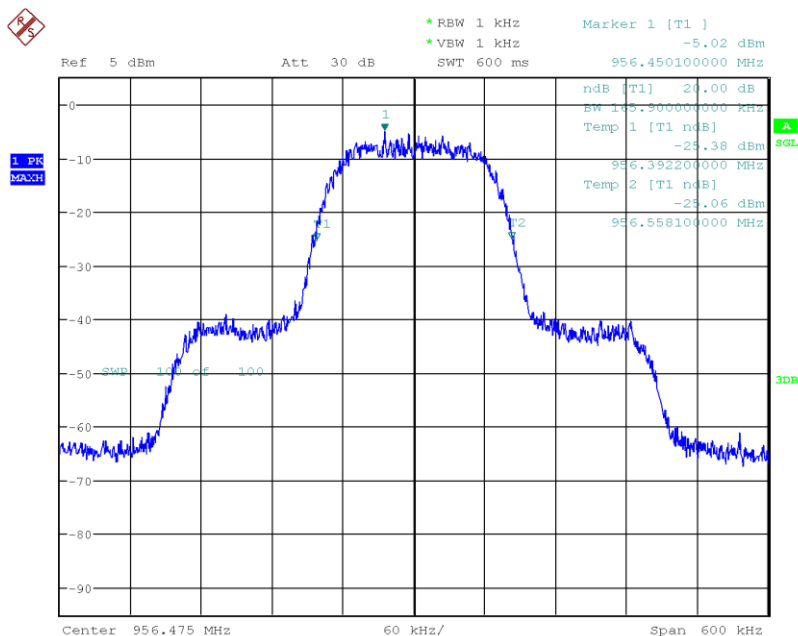
Normal Voltage, -30°C, D2 mode, 953.025 MHz



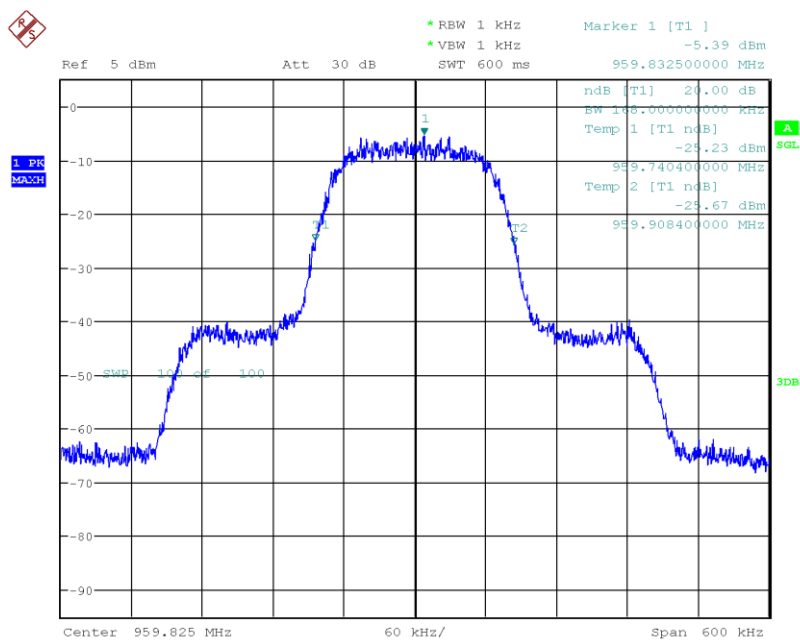
Normal Voltage, -30°C, D2 mode, 956.225 MHz



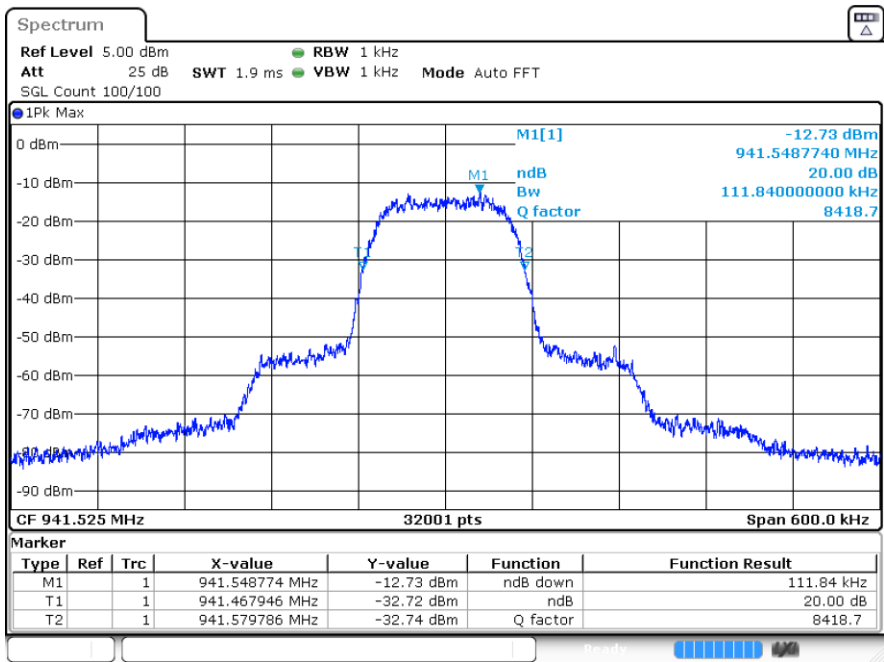
Normal Voltage, -30°C, D2 mode, 956.475 MHz



Normal Voltage, -30°C, D2 mode, 959.825 MHz

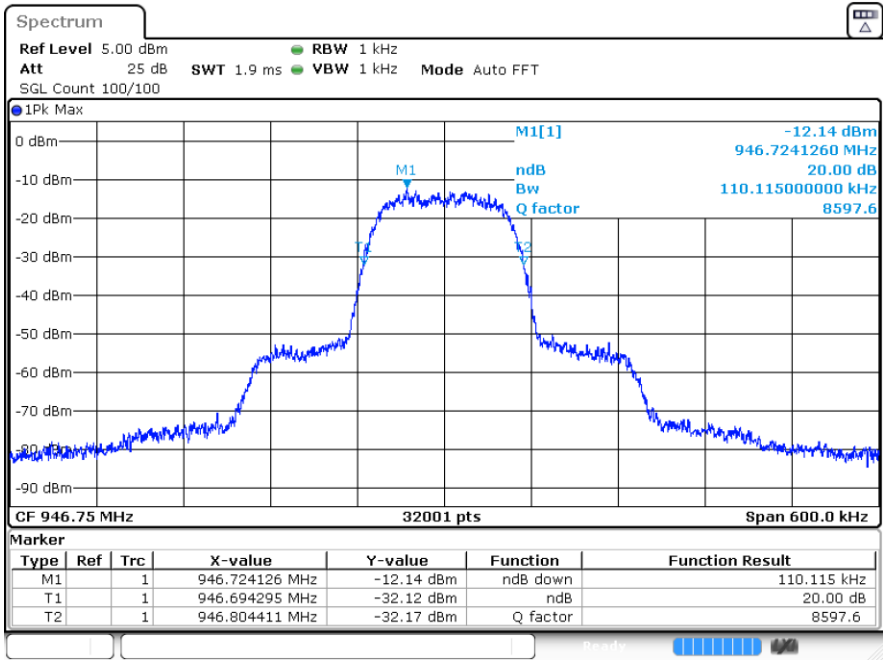


Normal Voltage, -30°C, HDM mode, 941.525 MHz



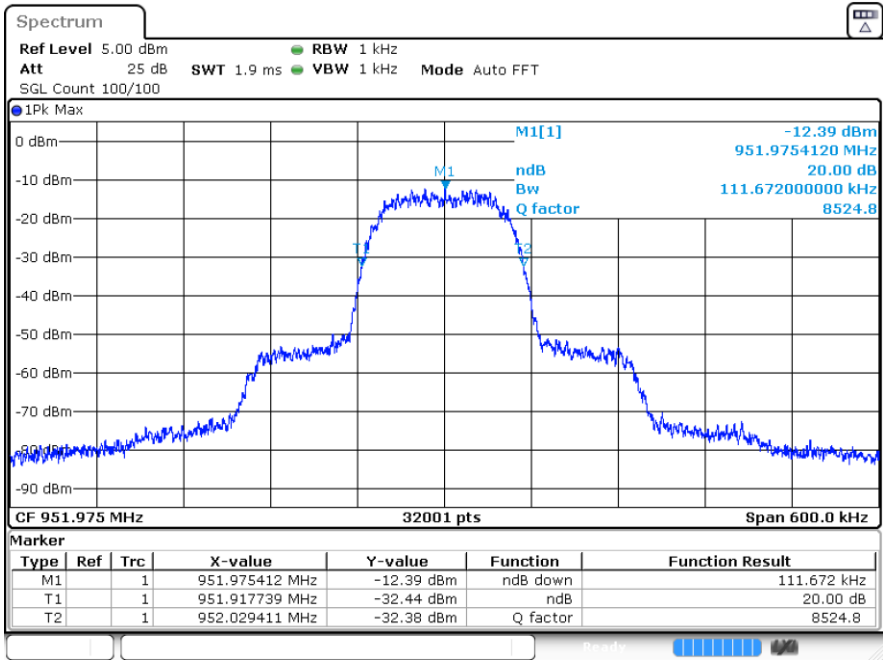
Date: 17. DEC. 2024 16:24:46

Normal Voltage, -30°C, HDM mode, 946.750 MHz



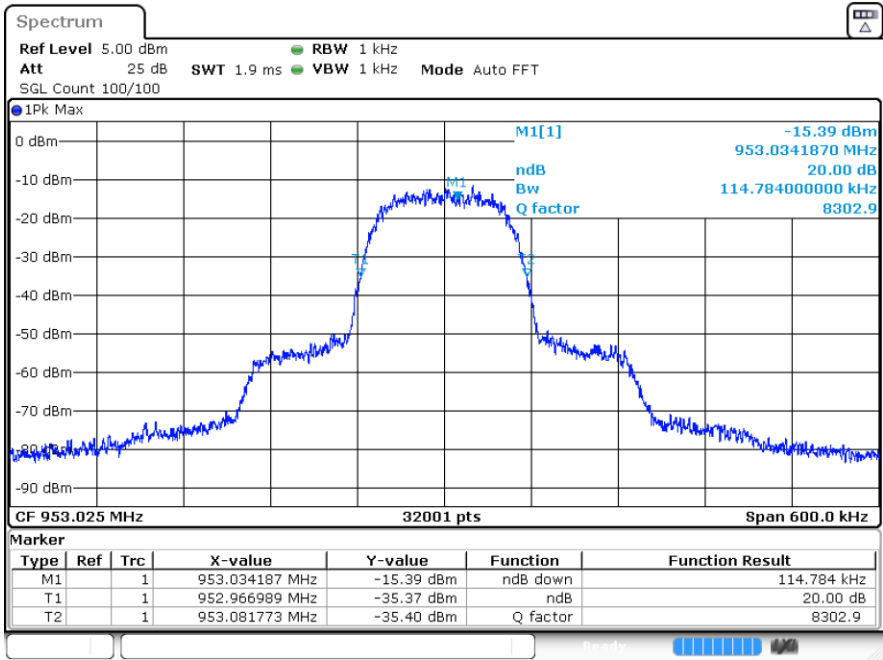
Date: 17.DEC.2024 16:48:13

Normal Voltage, -30°C, HDM mode, 951.975 MHz



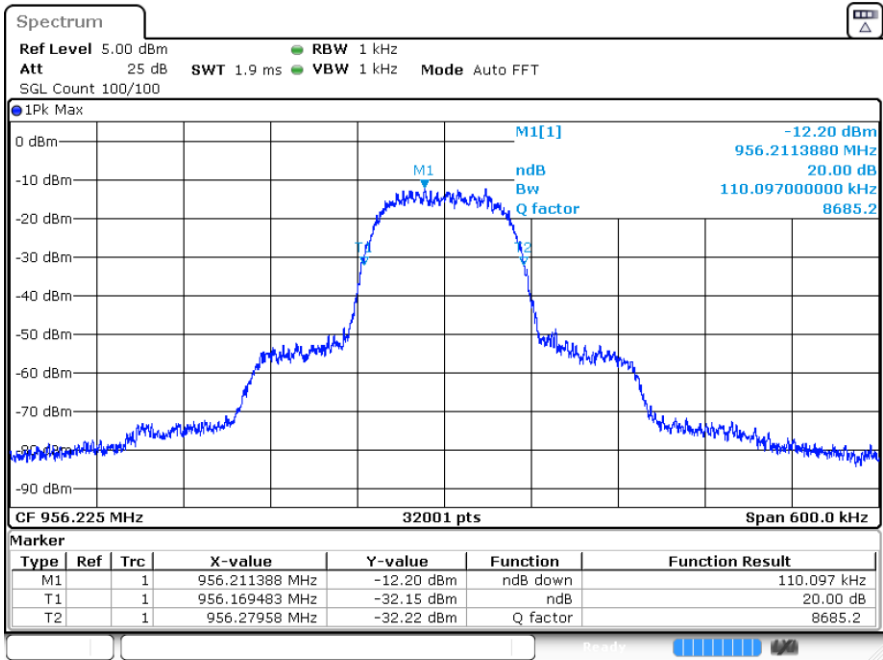
Date: 17.DEC.2024 17:09:48

Normal Voltage, -30°C, HDM mode, 953.025 MHz



Date: 17.DEC.2024 17:29:07

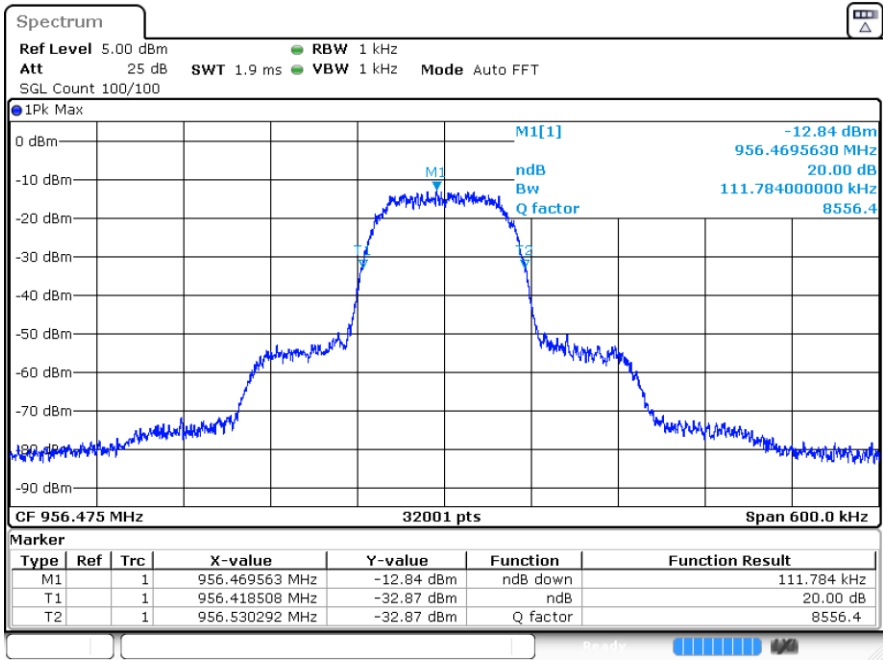
Normal Voltage, -30°C, HDM mode, 956.225 MHz



Date: 17.DEC.2024 17:38:40

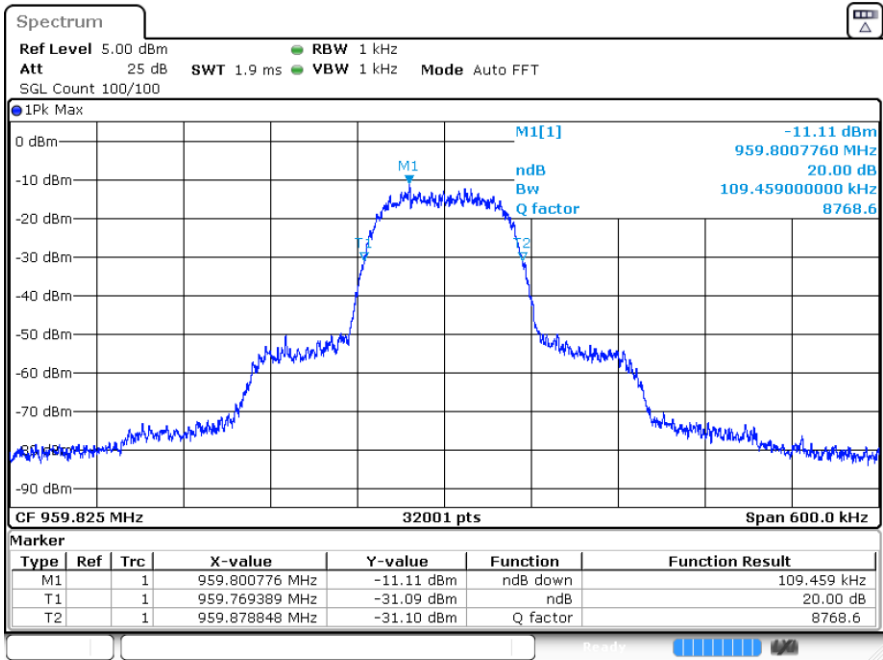


Normal Voltage, -30°C, HDM mode, 956.475 MHz



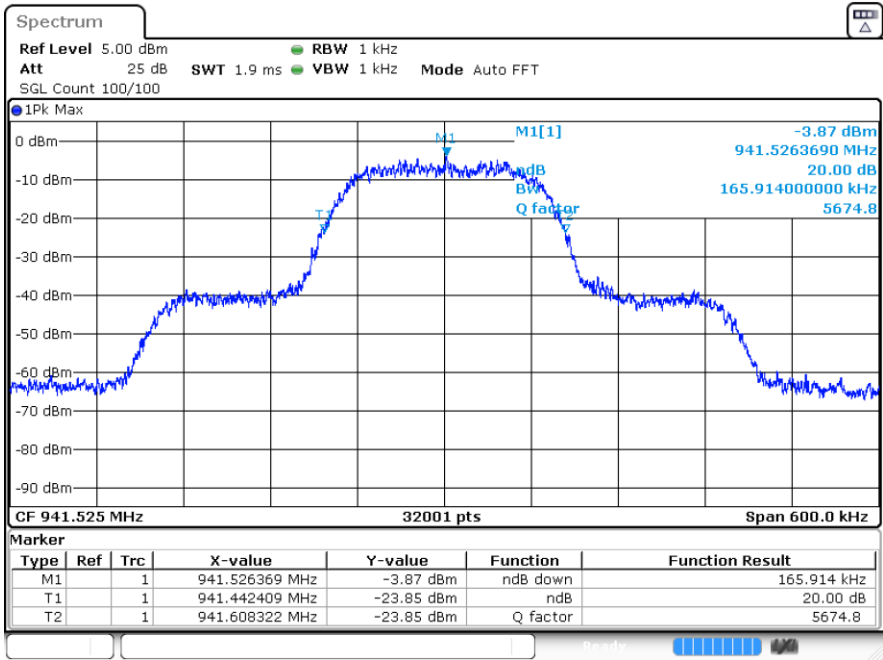
Date: 17 DEC 2024 17:45:56

Normal Voltage, -30°C, HDM mode, 959.825 MHz



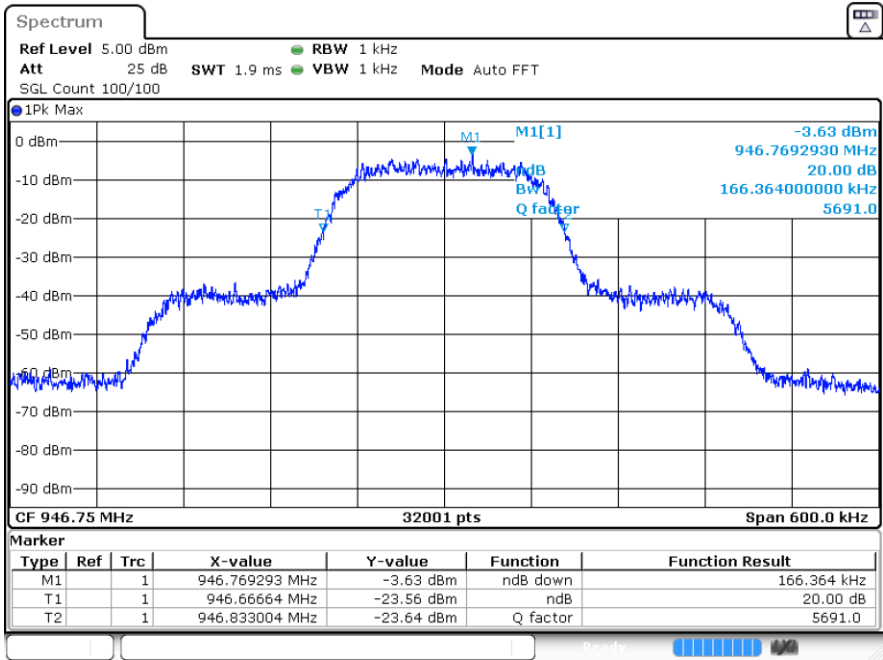
Date: 17 DEC 2024 16:21:07

Normal Voltage, -20°C, D2 mode, 941.525 MHz



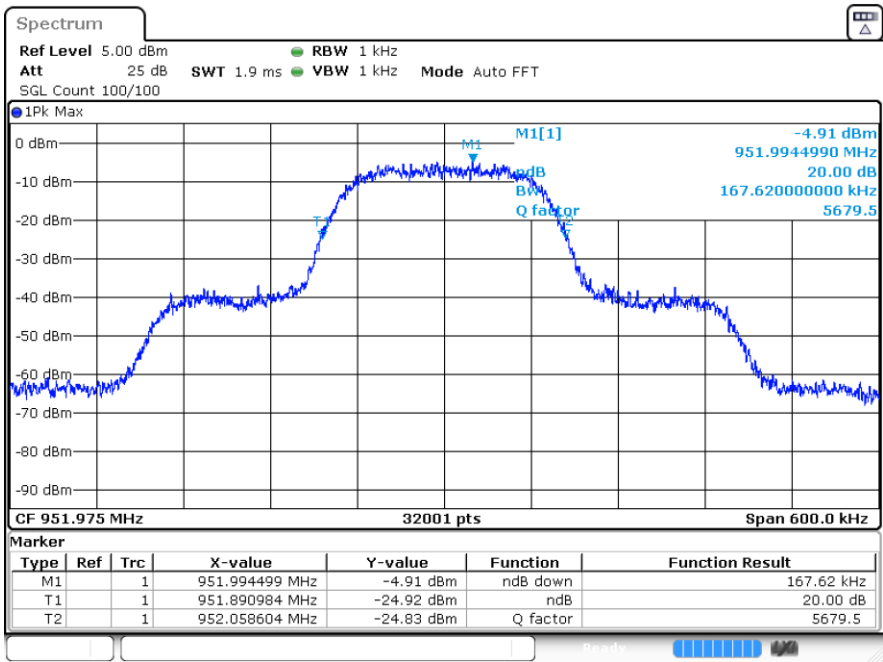
Date: 17.DEC.2024 19:16:01

Normal Voltage, -20°C, D2 mode, 946.750 MHz



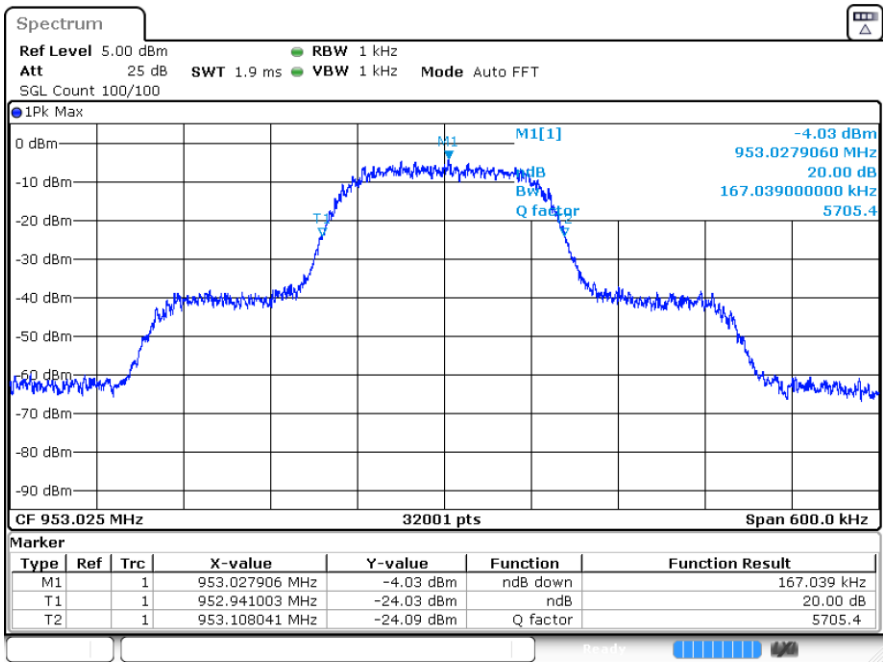
Date: 17.DEC.2024 19:25:34

Normal Voltage, -20°C, D2 mode, 951.975 MHz



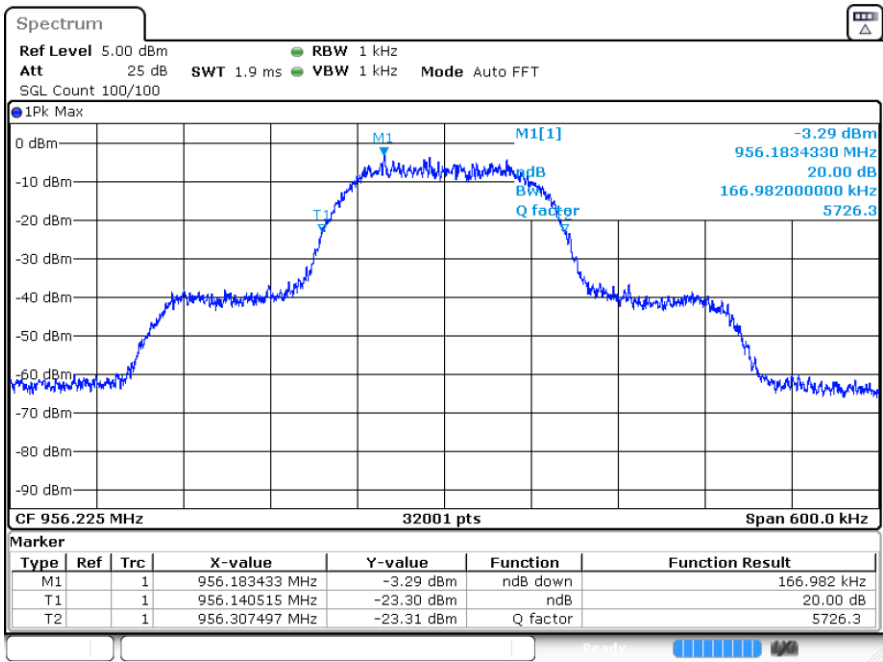
Date: 17.DEC.2024 19:30:31

Normal Voltage, -20°C, D2 mode, 953.025 MHz



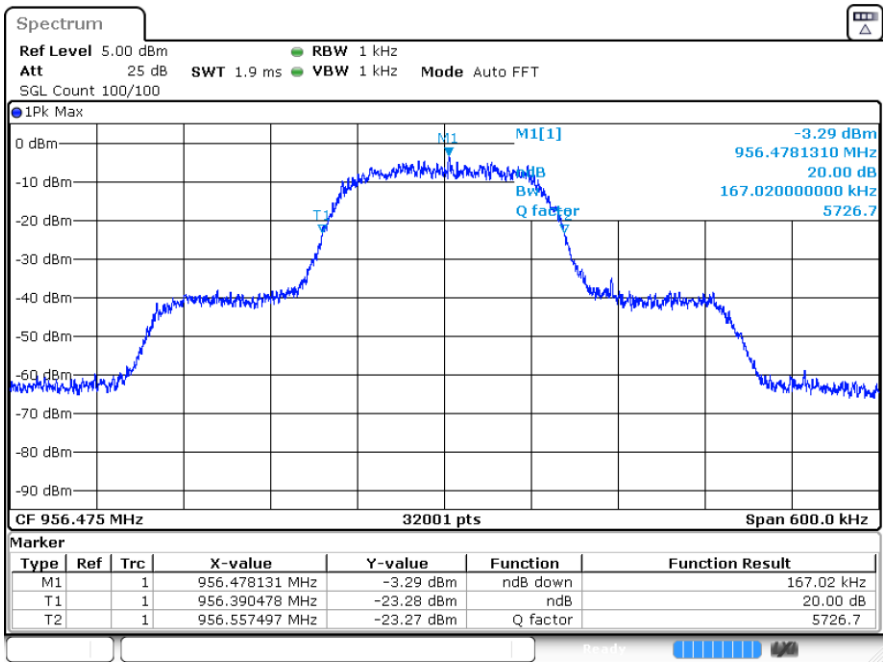
Date: 17.DEC.2024 19:36:06

Normal Voltage, -20°C, D2 mode, 956.225 MHz



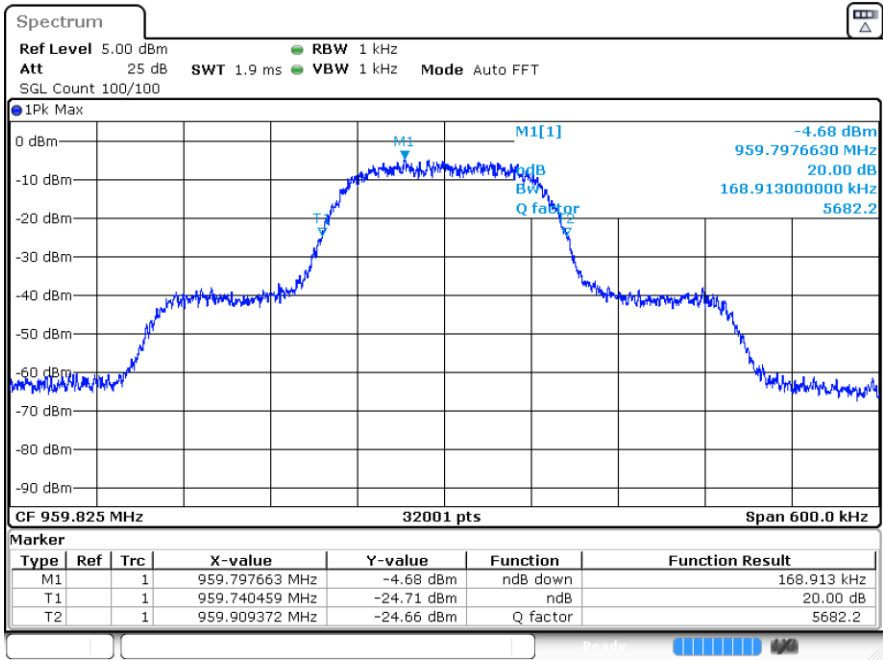
Date: 17.DEC.2024 19:03:41

Normal Voltage, -20°C, D2 mode, 956.475 MHz



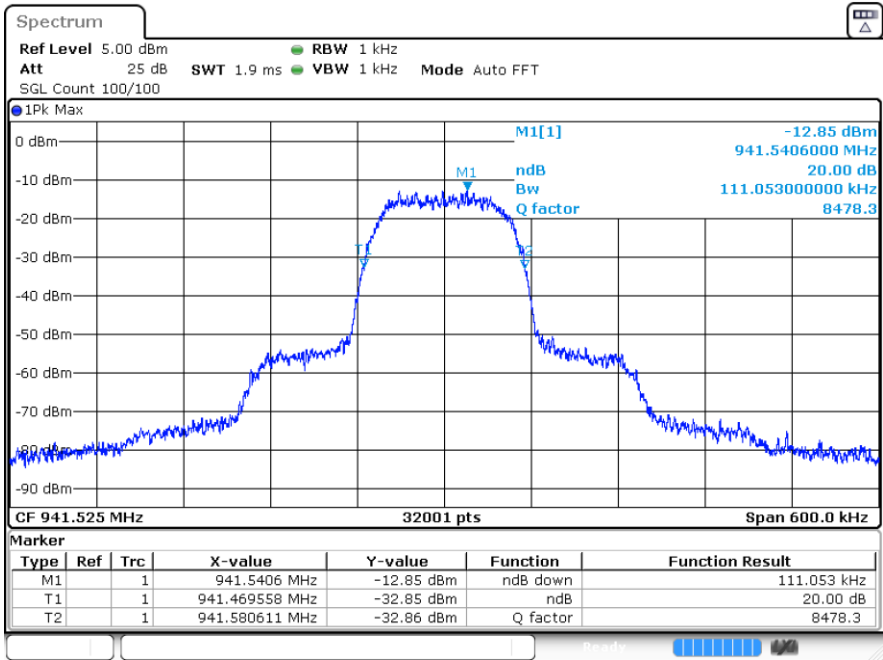
Date: 17.DEC.2024 19:06:20

Normal Voltage, -20°C, D2 mode, 959.825 MHz



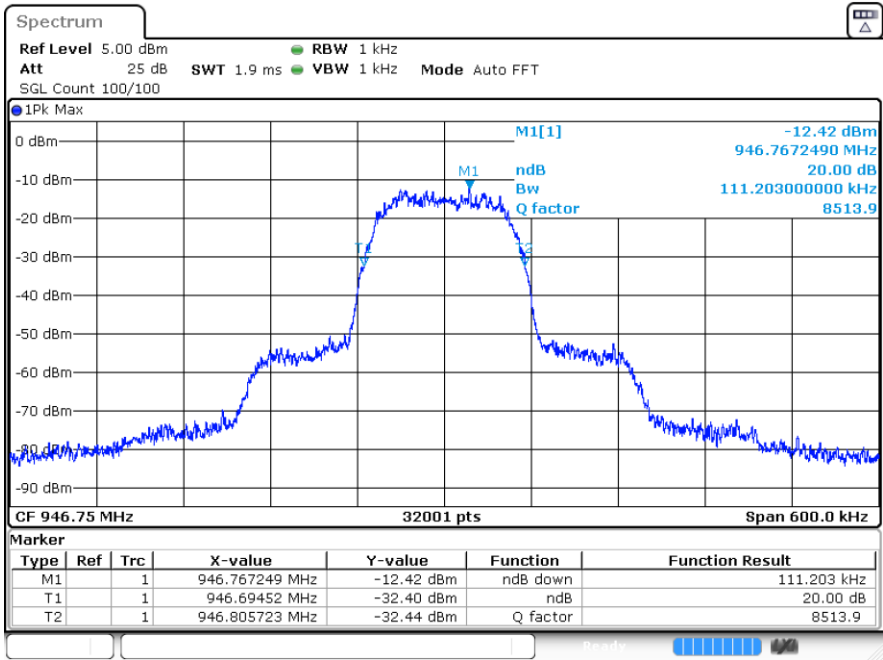
Date: 17.DEC.2024 19:13:03

Normal Voltage, -20°C, HDM mode, 941.525 MHz



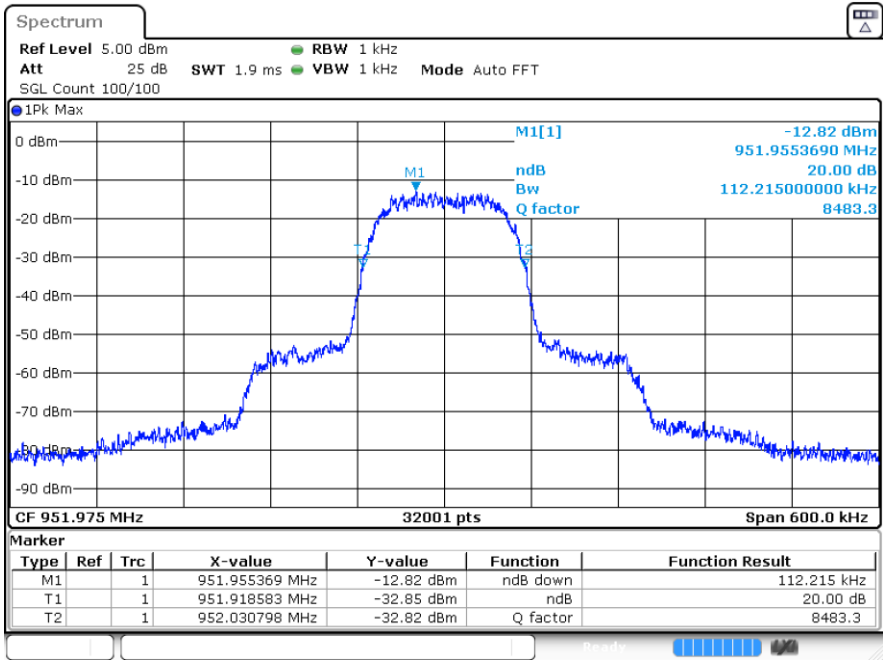
Date: 17.DEC.2024 18:13:55

Normal Voltage, -20°C, HDM mode, 946.750 MHz



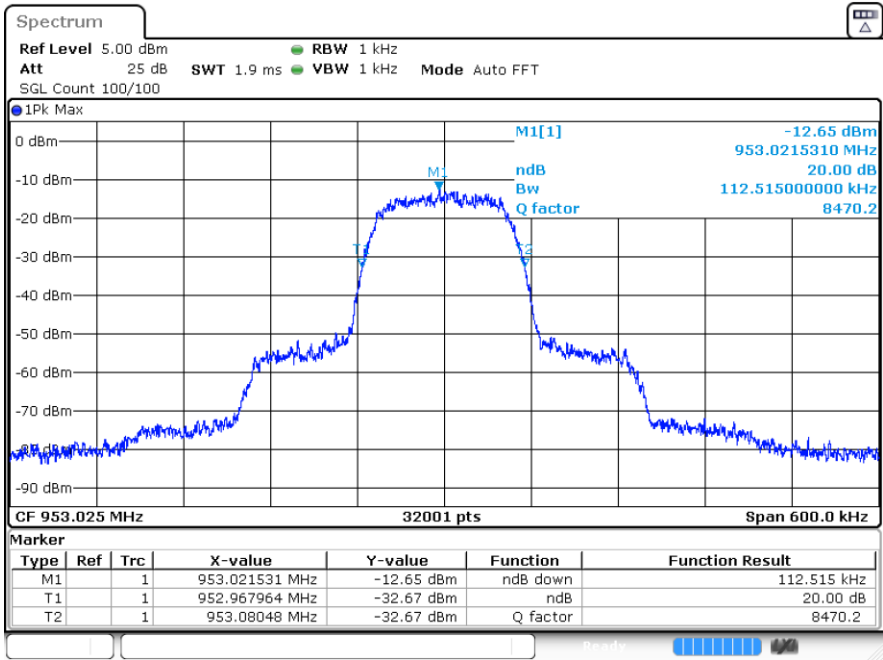
Date: 17. DEC. 2024 18:23:46

Normal Voltage, -20°C, HDM mode, 951.975 MHz



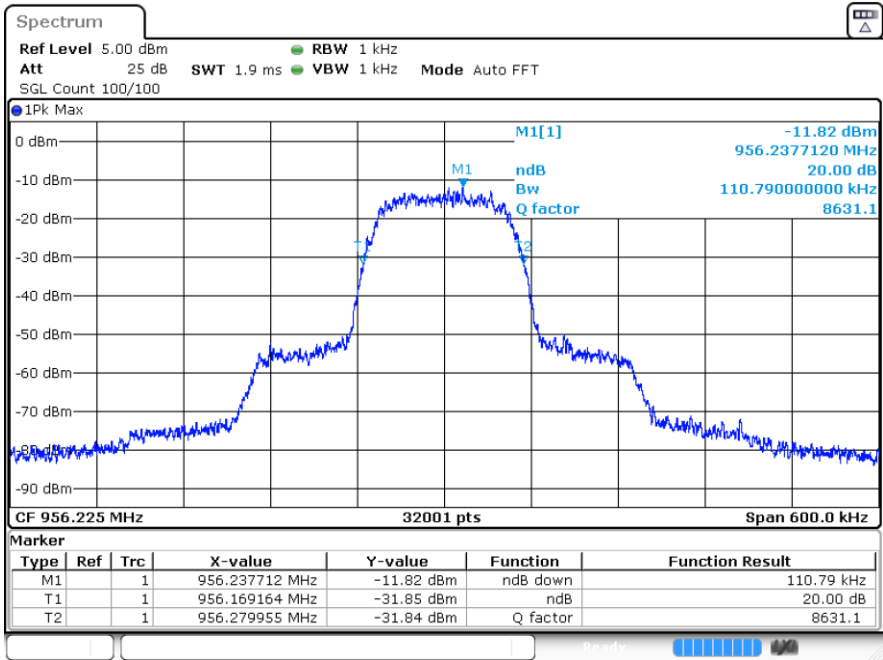
Date: 17. DEC. 2024 18:33:56

Normal Voltage, -20°C, HDM mode, 953.025 MHz



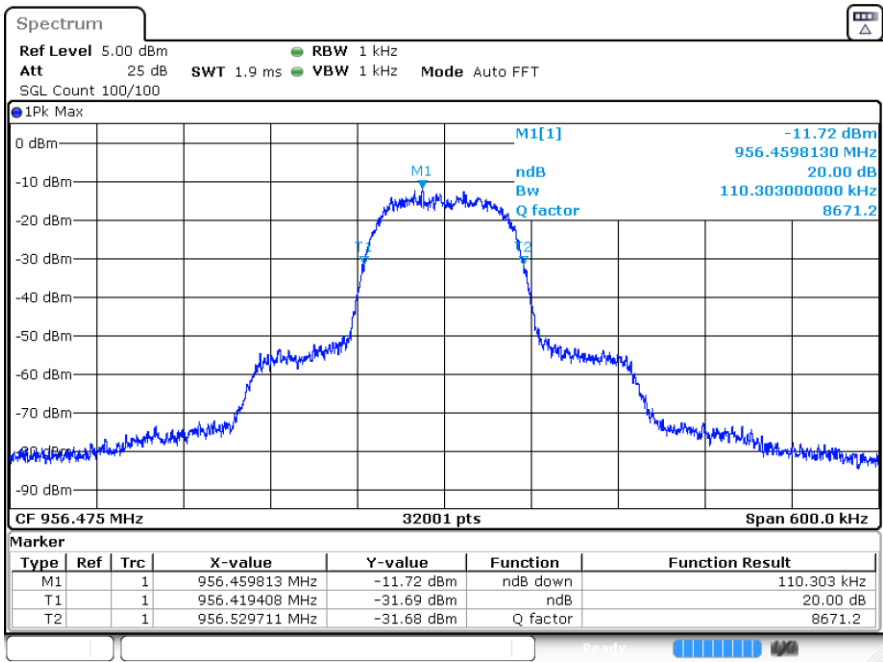
Date: 17.DEC.2024 18:49:01

Normal Voltage, -20°C, HDM mode, 956.225 MHz

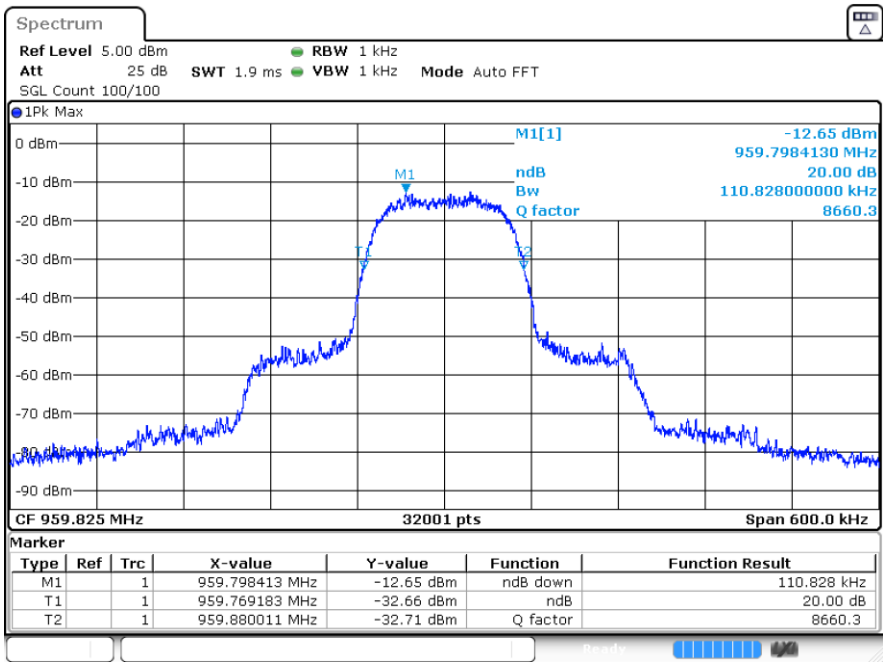


Date: 17.DEC.2024 18:58:33

Normal Voltage, -20°C, HDM mode, 956.475 MHz

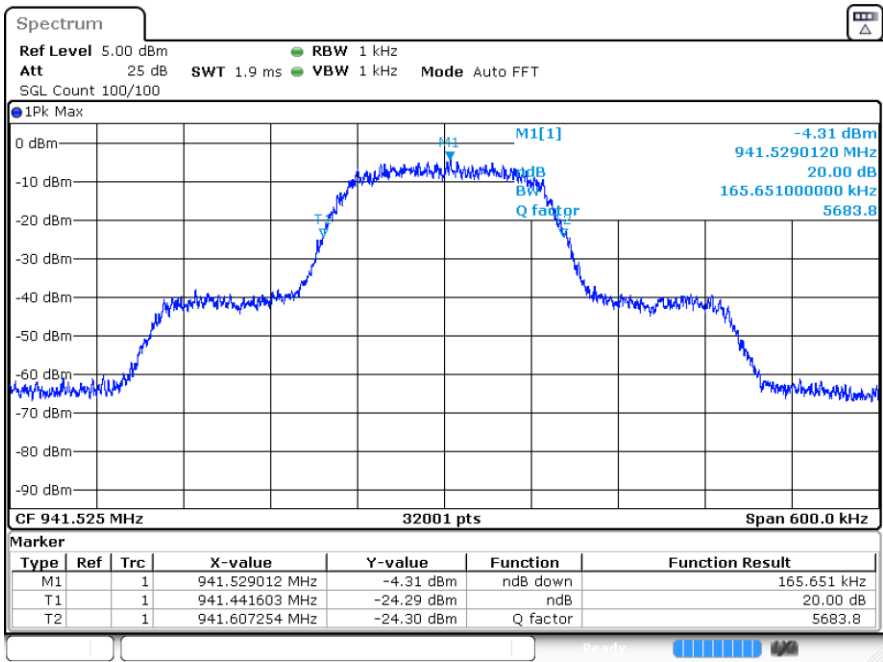


Normal Voltage, -20°C, HDM mode, 959.825 MHz



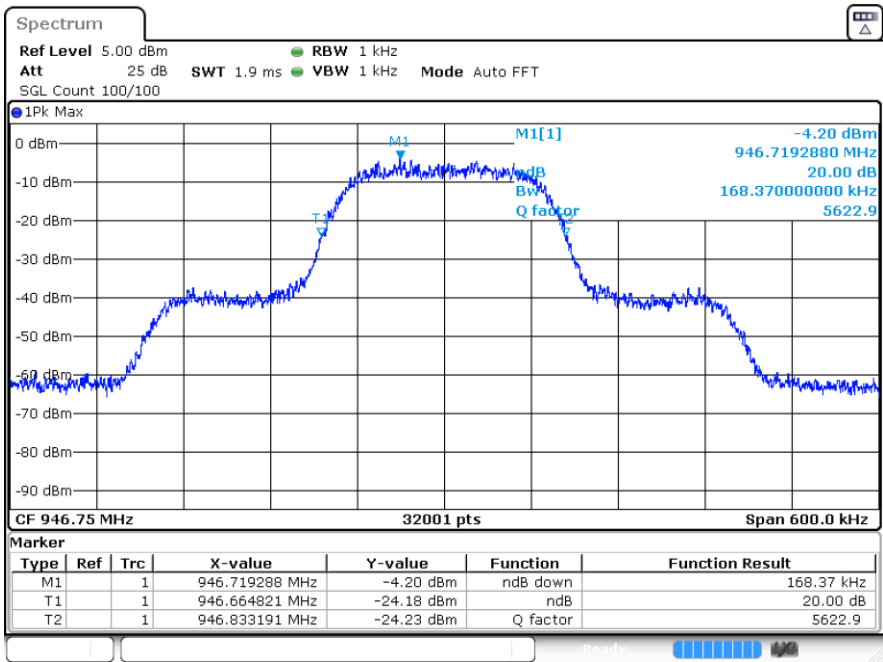


Normal Voltage, -10°C, D2 mode, 941.525 MHz



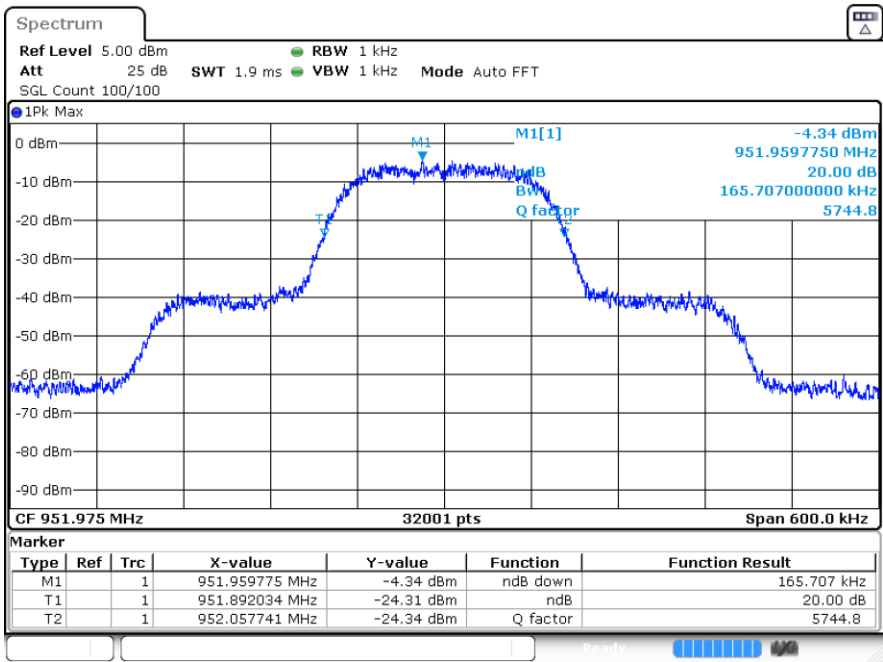
Date: 17 DEC 2024 20:21:35

Normal Voltage, -10°C, D2 mode, 946.750 MHz



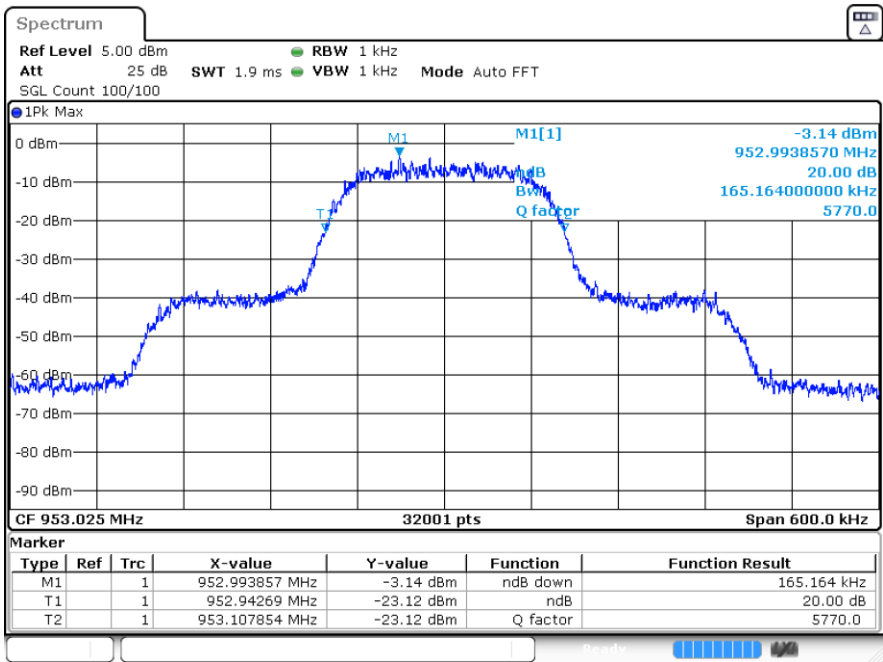
Date: 17 DEC 2024 20:26:17

Normal Voltage, -10°C, D2 mode, 951.975 MHz



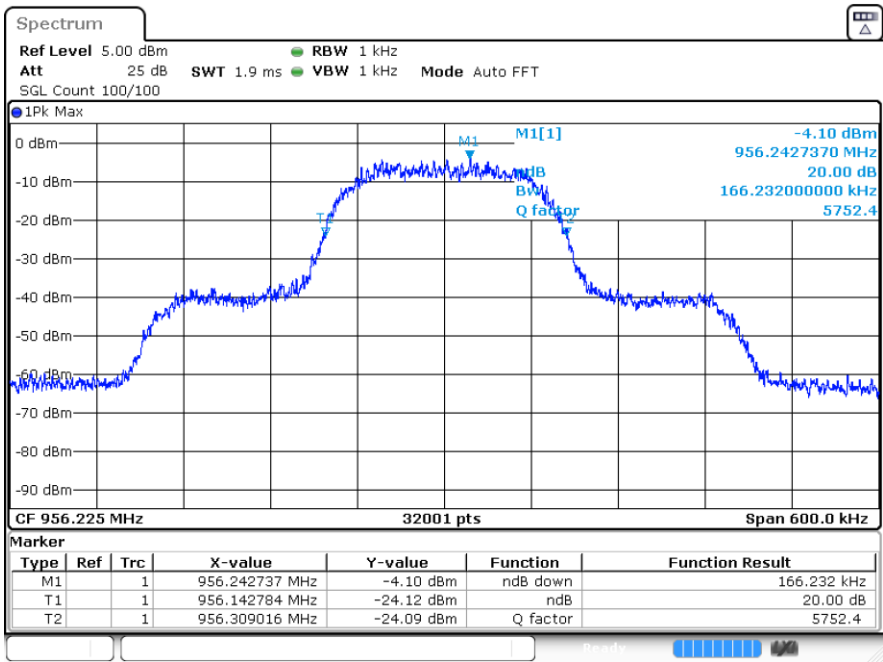
Date: 17.DEC.2024 20:33:33

Normal Voltage, -10°C, D2 mode, 953.025 MHz



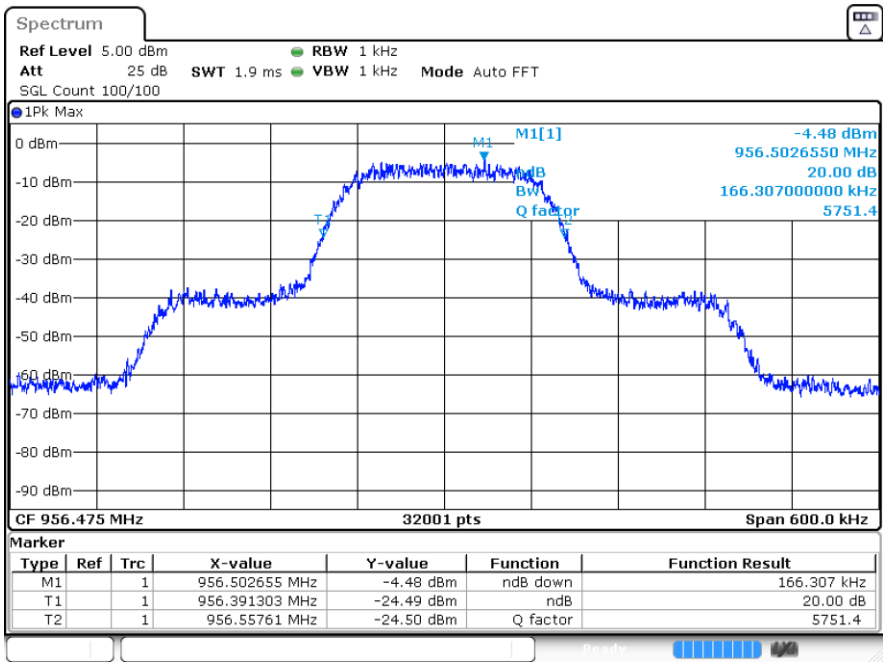
Date: 17.DEC.2024 19:49:55

Normal Voltage, -10°C, D2 mode, 956.225 MHz



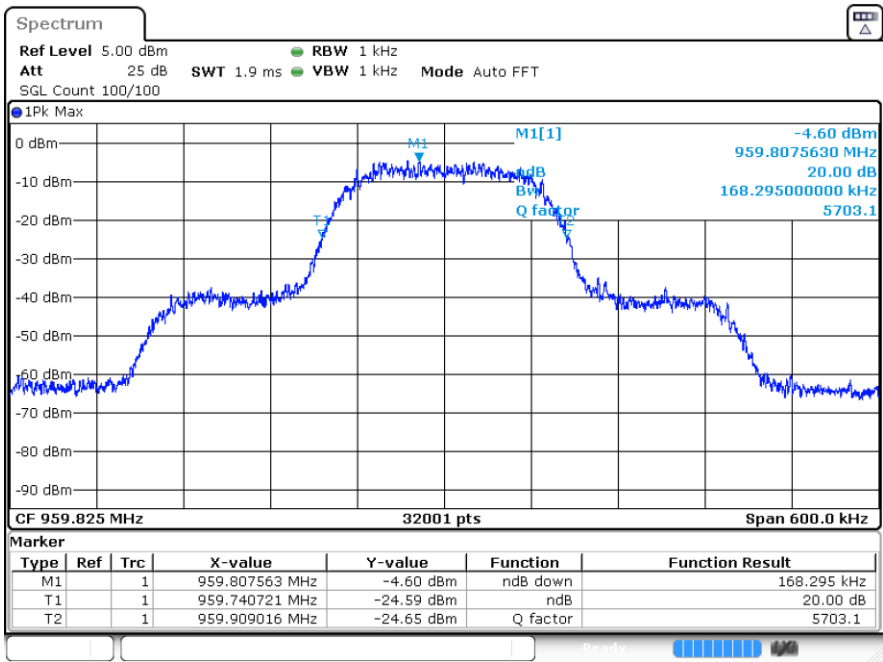
Date: 17. DEC. 2024 19:57:41

Normal Voltage, -10°C, D2 mode, 956.475 MHz



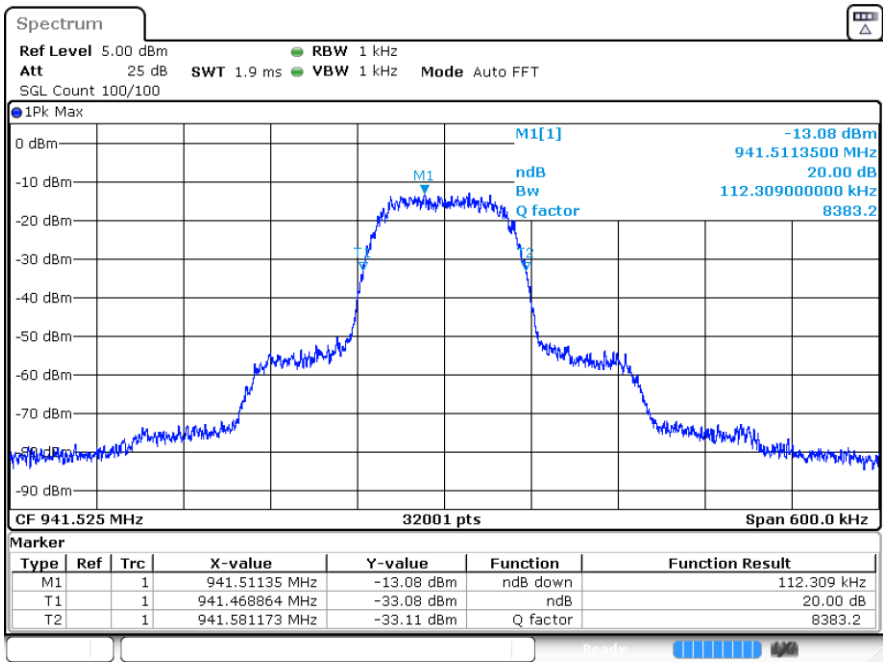
Date: 17. DEC. 2024 20:05:36

Normal Voltage, -10°C, D2 mode, 959.825 MHz



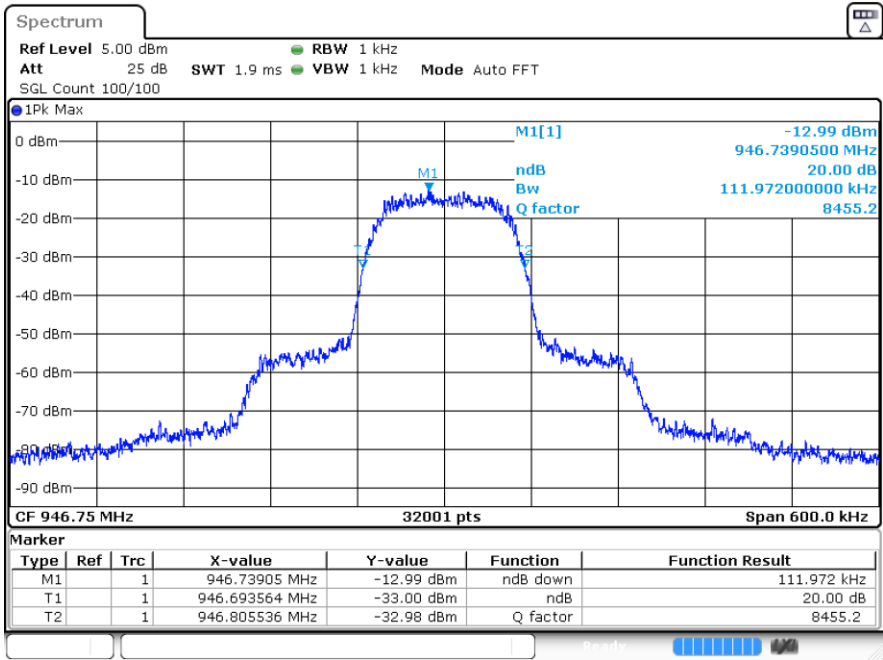
Date: 17.DEC.2024 20:11:42

Normal Voltage, -10°C, HDM mode, 941.525 MHz



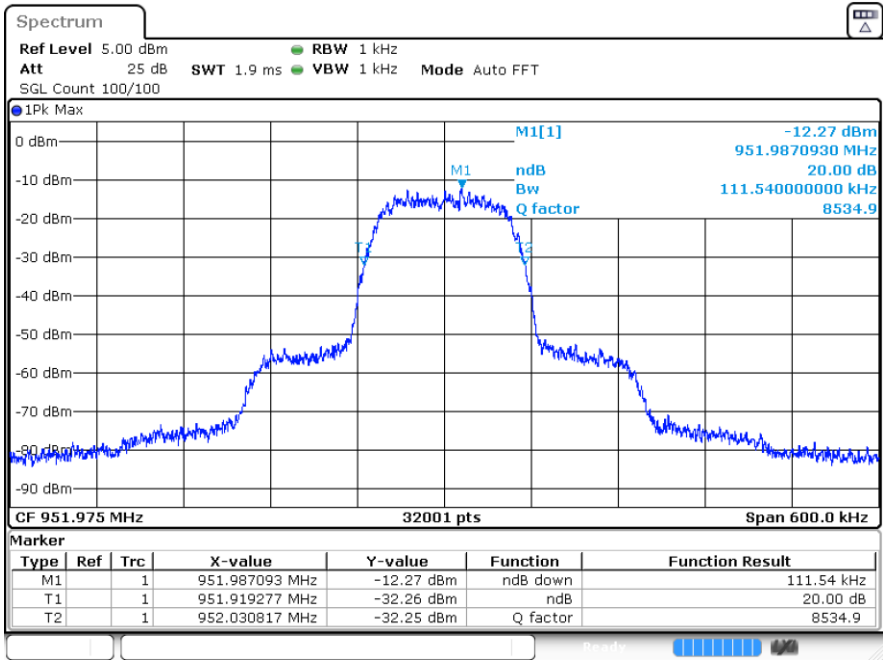
Date: 17.DEC.2024 21:36:15

Normal Voltage, -10°C, HDM mode, 946.750 MHz



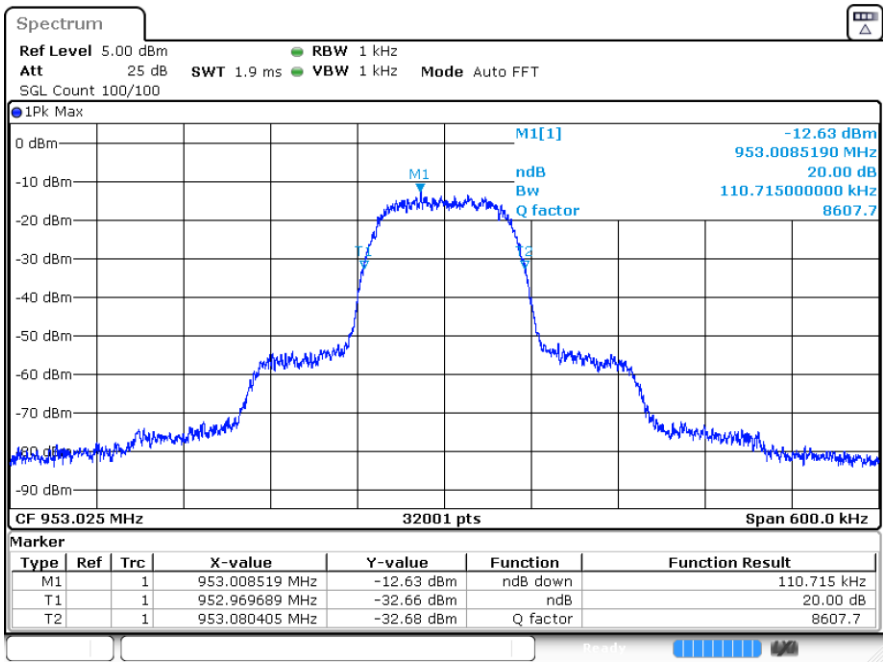
Date: 17.DEC.2024 21:39:22

Normal Voltage, -10°C, HDM mode, 951.975 MHz



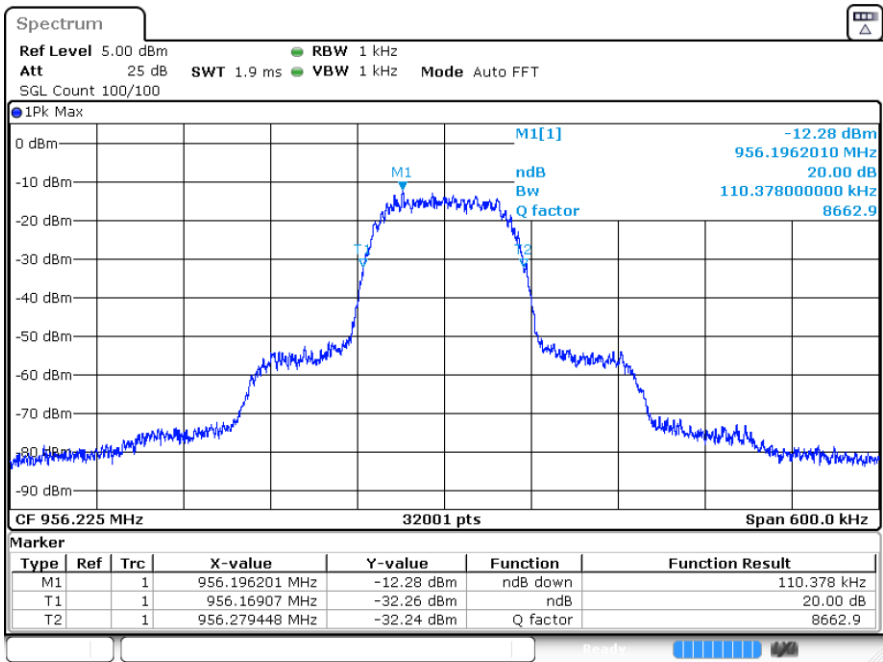
Date: 17.DEC.2024 21:08:48

Normal Voltage, -10°C, HDM mode, 953.025 MHz



Date: 17.DEC.2024 21:12:50

Normal Voltage, -10°C, HDM mode, 956.225 MHz



Date: 17.DEC.2024 21:17:49